

U.S. Serial No. 10/587,723

8325-0036.31

S36-US3

**PATENT**

I hereby certify that this correspondence is being deposited with the United States Patent and Trademark Office via EFS on November 15, 2007.

11/15/07  
Date

*Michelle Horton*  
Signature

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of:

MILLER et al.

Application No.: 10/587,723

International Appl. No. PCT/US2005/003245

International Filing Date: February 3, 2005

Title: METHODS AND COMPOSITIONS FOR  
TARGETED CLEAVAGE AND RECOMBINATION

Examiner:

Group Art Unit: 1636

Confirmation No.: 2253

Customer No.: 20855

**REQUEST FOR REPUBLICATION TO CORRECT A MATERIAL ERROR**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313

Sir:

Patent Application Publication US 2007/0218528 A1 published on September 20, 2007. Applicants have two months from the date of publication to request that the publication be amended. As such, this request is submitted prior to the **November 20, 2007** due date.

Applicants request that Publication US 2007/0218528 A1 be amended to correct the material error made by the U.S. Patent and Trademark Office, namely omitting an inventor. Publication US 2007/0218528 A1 lists only Jeffrey C. Miller as inventor. However, the pending application should also list Lei Zhang as an inventor, as shown on the attached copy of the Filing Receipt. As such, please republish Publication US 2007/0218528 A1 to list both Jeffrey C. Miller and Lei Zhang as inventors. A copy of Publication US 2007/0218528 A1 showing the change to be made is attached herewith.

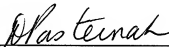
U.S. Serial No. 10/587,723  
8325-0036.31  
S36-US3

As this request is being submitted to correct an error made by the U.S. Patent and Trademark Office, no fees should be required by this request. However, if fees are required, the Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 18-1648.

Respectfully submitted,

Date: November 15, 2007

By: \_\_\_\_\_



Dahna S. Pasternak  
Registration No. 41,411  
Attorney for Applicants

ROBINS & PASTERNAK LLP  
1731 Embarcadero Road  
Suite 230  
Palo Alto, CA 94306  
Tel. (650) 493-3400  
Fax. (650) 493-3440



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPL NO.	FILING OR 371(c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLMS	IND CLMS
10/587,723	04/25/2007 ✓	1636	1230	8325-0036.31 (S36-US3)	14	1

20855  
ROBINS & PASTERNAK  
1731 EMBARCADERO ROAD  
SUITE 230  
PALO ALTO, CA 94303

CONFIRMATION NO. 2253 ✓

## FILING RECEIPT



\*OC000000025389780\*

Date Mailed: 08/17/2007

Receipt is acknowledged of this nonprovisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Jeffrey C. Miller, San Francisco, CA; ✓  
Lei Zhang, Davis, CA; ✓

## Assignment For Published Patent Application

Sangamo BioSciences, Inc., Richmond, CA ✓

## Power of Attorney:

Dahna Pasternak-41411 ✓

## Domestic Priority data as claimed by applicant

This application is a 371 of PCT/US05/03245 02/03/2005 ✓  
which claims benefit of 60/542,780 02/05/2004 ✓  
and claims benefit of 60/556,831 03/26/2004 ✓  
and claims benefit of 60/575,919 06/01/2004 ✓

## Foreign Applications

If Required, Foreign Filing License Granted: 06/14/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/587,723**

DOCKETED BPP

RECEIVED

AUG 22 2007

ROBINS &amp; PASTERNAK LLP

**Projected Publication Date:** 09/20/2007 ✓

**Non-Publication Request:** No

**Early Publication Request:** No

**Title**

Methods and Compositions for Targeted Cleavage and Recombination ✓

**Preliminary Class**

435

## **PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

---

### **LICENSE FOR FOREIGN FILING UNDER**

#### **Title 35, United States Code, Section 184**

#### **Title 37, Code of Federal Regulations, 5.11 & 5.15**

### **GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING

LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

#### **NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



US 20070218528A1

(19) **United States**(12) **Patent Application Publication**(10) **Pub. No.: US 2007/0218528 A1****Miller**(43) **Pub. Date:****Sep. 20, 2007**(54) **METHODS AND COMPOSITIONS FOR  
TARGETED CLEAVAGE AND  
RECOMBINATION****Publication Classification**(75) **Inventor:** Jeffrey C. Miller, San Francisco, CA(US); **Lei Zhang, Davis, CA (US)**(51) **Int. Cl.****C12P 19/34**

(2006.01)

**C12P 21/06**

(2006.01)

**C12N 9/22**

(2006.01)

(52) **U.S. Cl. ....** 435/91.2; 435/199; 435/69.1;

435/320.1; 435/325

**Correspondence Address:****ROBINS & PASTERNAK****1731 EMBARCADERO ROAD****SUITE 230****PALO ALTO, CA 94303 (US)**

(57)

**ABSTRACT**(73) **Assignee:** Sangamo BioSciences, Inc., Richmond,  
CA (US)(21) **Appl. No.:** 10/587,723(22) **PCT Filed:** Feb. 3, 2005(86) **PCT No.:** PCT/US05/03245

§ 371(c)(1),

(2), (4) **Date:** Apr. 25, 2007**Related U.S. Application Data**(60) **Provisional application No. 60/542,780, filed on Feb. 5, 2004. Provisional application No. 60/556,831, filed on Mar. 26, 2004. Provisional application No. 60/575, 919, filed on Jun. 1, 2004.**

Disclosed herein are methods and compositions for targeted cleavage of a genomic sequence, targeted alteration of a genomic region and an exogenous polynucleotide homologous to the genomic region. The compositions include fusion proteins comprising a cleavage domain (or cleavage half-domain) and an engineered zinc finger domain, as well as polynucleotides encoding same. Fusion proteins comprising cleavage half-domains are used in pairs, to reconstitute a functional cleavage domain. In these fusion proteins, the zinc finger domain can be N-terminal to the cleavage half-domain, or the cleavage half-domain can be N-terminal to the zinc finger domain. The availability of fusion endonucleases having these different polarities allows targeting (and thereby binding) of zinc finger endonucleases either to opposite strands of the DNA target or to the same strand of the DNA target, thereby increasing the number of possible sequences which can be targeted and cleaved by the fusion proteins.